

We claim:

1. The process for the separation of oxidation products from a reaction mixture comprised of said products in a solvent at dense phase conditions wherein the reaction mixture is contacted with an extraction solvent  
5 which is substantially immiscible with the dense phase solvent and separating a liquid phase containing the oxidation products from a dense phase solvent stream.
2. The process of claim 1 wherein the extraction solvent has a total solubility parameter greater than  $24 \text{ MPa}^{0.5}$  with the hydrogen bonding portion of  
10 the solubility parameter greater than  $15 \text{ MPa}^{0.5}$ .
3. The process of claim 1 wherein the dense phase solvent is carbon dioxide.
4. The process of claim 1 wherein the dense phase solvent is propane.
- 15 5. The process of claim 1 wherein the dense phase solvent is propylene.
6. The process of claim 1 wherein the oxidation products comprise propylene oxide.
7. The process of claim 1 wherein the immiscible solvent is an  
20 aqueous solvent.
8. The process of claim 1 wherein the immiscible solvent is acetonitrile.